

We claim:

- 1 1. A method for providing a three-dimensional image, comprising:
2 selecting a screen size or range of screen sizes for a three-dimensional image; and
3 scaling depth information associated with objects in a three-dimensional image to
4 preserve perceived depths of the objects when the three-dimensional image is presented at
5 the screen size or within the range of screen sizes selected.
- 1 2. The method for providing a three-dimensional image of claim 1, wherein the
2 depth information is scaled down.
- 1 3. The method for providing a three-dimensional image of claim 1, wherein the
2 depth information is scaled up.
- 1 4. The method for providing a three-dimensional image of claim 1, wherein the
2 depth information is scaled using an interactive user interface configured to allow a user of
3 the interactive user interface to view a representation of the three-dimensional image during
4 the scaling of the depth information.
- 1 5. The method for providing a three-dimensional image of claim 1, wherein the
2 depth information is at least partially automatically scaled depending upon the screen size or
3 the range of screen sizes selected.
- 1 6. The method for providing a three-dimensional image of claim 1, further
2 comprising:
3 scaling hidden surface reconstruction information associated with hidden surface
4 areas in the three-dimensional image to preserve reconstructions of the hidden surface areas
5 when the three-dimensional image is presented at the screen size or within the range of
6 screen sizes selected.

1 7. The method for providing a three-dimensional image of claim 6, wherein the
2 hidden surface reconstruction information is scaled down.

1 8. The method for providing a three-dimensional image of claim 6, wherein the
2 hidden surface reconstruction information is scaled up.

1 9. The method for providing a three-dimensional image of claim 6, wherein the
2 hidden surface reconstruction information is scaled using an interactive user interface
3 configured to allow a user of the interactive user interface to view a representation of the
4 three-dimensional image during the scaling of the hidden surface reconstruction information.

1 10. The method for providing a three-dimensional image of claim 6, wherein the
2 hidden surface reconstruction information is at least partially automatically scaled depending
3 upon the screen size or the range of screen sizes selected.

1 11. A method for providing a three-dimensional image, comprising:
2 providing a machine-readable data file that includes scaling depth information
3 associated with objects in a three-dimensional image, the scaling depth information being
4 usable to preserve perceived depths of the objects within the three-dimensional image when
5 the three-dimensional image is presented at a particular screen size or within a particular
6 range of screen sizes.

1 12. A method for providing a three-dimensional image, comprising:
2 providing a machine-readable data file that includes scaling hidden surface
3 reconstruction information associated with hidden surface areas in a three-dimensional
4 image, the scaling hidden surface reconstruction information being usable to preserve
5 reconstructions of the hidden surface areas when the three-dimensional image is presented at
6 a particular screen size or within a particular range of screen sizes.

1 13. A method for providing a three-dimensional image, comprising:
2 scaling depth and/or hidden surface area reconstruction information associated with a
3 three-dimensional image to preserve perceived depths of objects or other image components
4 within the three-dimensional image when the three-dimensional image is presented at a
5 particular screen size, multiple screen sizes, or within a particular range of screen sizes.

1 14. The method for providing a three-dimensional image of claim 13, wherein the
2 scaling is performed on an image used to create the three-dimensional image.

1 15. The method for providing a three-dimensional image of claim 13, wherein the
2 scaling is performed at an interactive user interface configured to allow a user of the
3 interactive user interface to view the three-dimensional image during the scaling.

1 16. The method for providing a three-dimensional image of claim 13, wherein the
2 scaling is performed on a lower resolution version of an image used to create the three-
3 dimensional image.

1 17. The method for providing a three-dimensional image of claim 13, wherein the
2 scaling is performed at an interactive user interface configured to allow a user of the
3 interactive user interface to view a lower resolution version of the three-dimensional image
4 during the scaling.

1 18. A method for providing a three-dimensional image, comprising:
2 scaling down higher resolution images to generate lower resolution images;
3 processing the lower resolution images to determine three-dimensional conversion
4 information; and
5 applying the three-dimensional conversion information to the higher resolution images
6 to create three-dimensional images.

1 19. The method for providing a three-dimensional image of claim 18, wherein
2 scaling down includes reducing an image file size of the higher resolution images to generate
3 the lower resolution images.

1 20. The method for providing a three-dimensional image of claim 18, wherein
2 scaling down includes reducing a number of pixels of the higher resolution images to generate
3 the lower resolution images.

1 21. The method for providing a three-dimensional image of claim 18, wherein
2 scaling down includes reducing a color depth size of the higher resolution images to generate
3 the lower resolution images.

1 22. The method for providing a three-dimensional image of claim 18, wherein the
2 three-dimensional conversion information includes depth perspective information.

1 23. The method for providing a three-dimensional image of claim 18, wherein the
2 three-dimensional conversion information includes hidden surface reconstruction information.

1 24. The method for providing a three-dimensional image of claim 18, wherein the
2 three-dimensional conversion information is scaled up before it is applied to the higher
3 resolution images.

1 25. A method for providing a three-dimensional image, comprising:
2 receiving or accessing image data created by scaling depth and/or hidden surface area
3 reconstruction information associated with a three-dimensional image to preserve perceived
4 depths of objects or other image components within the three-dimensional image when the
5 three-dimensional image is presented at a particular screen size, multiple screen sizes, or
6 within a particular range of screen sizes; and
7 using the image data to reproduce a three-dimensional image.

1 26. The method for providing a three-dimensional image of claim 25, wherein
2 using the image data to reproduce the three-dimensional image includes displaying the three-
3 dimensional image.

1 27. The method for providing a three-dimensional image of claim 25, wherein
2 using the image data to reproduce the three-dimensional image includes projecting the three-
3 dimensional image.

1 28. A method for providing three-dimensional images, comprising:
2 receiving or accessing image data created by scaling depth and/or hidden surface area
3 reconstruction information associated with three-dimensional images in order to preserve
4 perceived depths of objects or other image components within the three-dimensional images
5 when the three-dimensional images are presented at a particular screen size, multiple screen
6 sizes, or within a particular range of screen sizes; and
7 projecting the three-dimensional images on movie screens.

1 29. The method for providing three-dimensional images of claim 28, wherein the
2 three-dimensional images are projected using a film media.

1 30. The method for providing three-dimensional images of claim 28, wherein the
2 three-dimensional images are digitally projected.

1 31. A method for providing three-dimensional images, comprising:
2 receiving or accessing image data created by scaling depth and/or hidden surface area
3 reconstruction information associated with three-dimensional images in order to preserve
4 perceived depths of objects or other image components within the three-dimensional images
5 when the three-dimensional images are presented at a particular screen size, multiple screen
6 sizes, or within a particular range of screen sizes; and
7 displaying the three-dimensional images in a home theatre environment.

1 32. A method for providing three-dimensional images, comprising:
2 receiving or accessing image data created by scaling depth and/or hidden surface area
3 reconstruction information associated with three-dimensional images in order to preserve
4 perceived depths of objects or other image components within the three-dimensional images
5 when the three-dimensional images are presented at a particular screen size, multiple screen
6 sizes, or within a particular range of screen sizes; and
7 displaying the three-dimensional images on a video display.

1 33. The method for providing three-dimensional images of claim 32, wherein the
2 video display is a television.

1 34. The method for providing three-dimensional images of claim 32, wherein the
2 video display is a television-type display.

1 35. The method for providing three-dimensional images of claim 32, wherein the
2 video display is a television-type home video display.

1 36. The method for providing three-dimensional images of claim 32, wherein the
2 video display is a computer monitor.

1 37. A method for providing a three-dimensional image, comprising:
2 receiving or accessing image data created by scaling depth and/or hidden surface area
3 reconstruction information associated with a three-dimensional image to preserve perceived
4 depths of objects or other image components within the three-dimensional image when the
5 three-dimensional image is presented at a particular screen size, multiple screen sizes, or
6 within a particular range of screen sizes; and
7 recording the image data on a data storage device.

1 38. The method for providing a three-dimensional image of claim 37, wherein the
2 data storage device is a movie storage device suitable for use in movie theatres.

1 39. The method for providing a three-dimensional image of claim 37, wherein the
2 data storage device is a server.

1 40. The method for providing a three-dimensional image of claim 37, wherein the
2 data storage device is a hard drive.

1 41. The method for providing a three-dimensional image of claim 37, wherein the
2 data storage device is a digital media disk.

1 42. The method for providing a three-dimensional image of claim 37, wherein the
2 data storage device is a digital versatile disk.

1 43. The method for providing a three-dimensional image of claim 37, wherein the
2 image data is recorded such that the data storage device can be used to reproduce the three-
3 dimensional image with a digital projector.

1 44. The method for providing a three-dimensional image of claim 37, wherein the
2 image data is recorded such that the data storage device can be used to reproduce the three-
3 dimensional image on a video display.

1 45. The method for providing a three-dimensional image of claim 37, wherein the
2 image data is recorded such that the data storage device can be used to reproduce the three-
3 dimensional image on a television.

1 46. The method for providing a three-dimensional image of claim 37, wherein the
2 image data is recorded such that the data storage device can be used to reproduce the three-
3 dimensional image on a television-type display.

1 47. The method for providing a three-dimensional image of claim 37, wherein the
2 image data is recorded such that the data storage device can be used to reproduce the three-
3 dimensional image on a television-type home video display.

1 48. The method for providing a three-dimensional image of claim 37, wherein the
2 image data is recorded such that the data storage device can be used to reproduce the three-
3 dimensional image on a computer monitor.

1 49. A method for providing a three-dimensional image, comprising:
2 receiving or accessing image data created by scaling depth and/or hidden surface area
3 reconstruction information associated with a three-dimensional image to preserve perceived
4 depths of objects or other image components within the three-dimensional image when the
5 three-dimensional image is presented at a particular screen size, multiple screen sizes, or
6 within a particular range of screen sizes; and
7 using an electromagnetic transmission medium to transmit the image data.

1 50. The method for providing a three-dimensional image of claim 49, wherein the
2 electromagnetic transmission medium includes radio waves.

1 51. A method for providing a three-dimensional image, comprising:
2 receiving or accessing image data created by scaling depth and/or hidden surface area
3 reconstruction information associated with a three-dimensional image to preserve perceived
4 depths of objects or other image components within the three-dimensional image when the
5 three-dimensional image is presented at a particular screen size, multiple screen sizes, or
6 within a particular range of screen sizes; and
7 using a communications network to transmit the image data.

1 52. The method for providing a three-dimensional image of claim 51, wherein the
2 communications network includes the Internet.